

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of the Claims:

Claims 1-11 (Canceled).

12. (Original) A process for making a self-sealing material which comprises forming a mixture comprising a hydrogel material and a substrate material and heating the mixture to the sintering temperature of the substrate material to form a porous substrate, wherein the sintering temperature is greater than the melting point of the hydrogel material.

13. (Original) The process of claim 12 wherein the hydrogel material is selected from the group consisting of hydrophilic polyurethane, hydrophilic polyurea, and hydrophilic polyureaurethane.

14. (Original) The process of claim 13 wherein the hydrogel material is hydrophilic polyurethane.

15. (Original) The process of claim 12 wherein the porous substrate material is a polymer selected from the group consisting of: acrylic polymers; polyolefins; polyesters; polyamides; poly(ether sulfone); polytetrafluoroethylene; polyvinyl chloride; polycarbonates; and polyurethanes.

16. (Original) The process of claim 15 wherein the porous substrate material is a polyolefin.

Claim 17. (Canceled).

18. (Original) A process for making a self-sealing material which comprises immersing at least part of a porous substrate in a solution comprising a non-aqueous solvent and a hydrogel material.

19. (Original) The process of claim 18 wherein the non-aqueous solvent is selected from the group consisting of ethers and alcohols.

20. (Original) The process of claim 19 wherein the non-aqueous solvent is ethanol or methanol.

21. (Original) The process of claim 18 wherein the hydrogel material is selected from the group consisting of hydrophilic polyurethane, hydrophilic polyurea, and hydrophilic polyurethane.

22. (Original) The process of claim 21 wherein the hydrogel material is hydrophilic polyurethane.

Claim 23. (Canceled).

24. (Original) A process for making a self-sealing material which comprises immersing at least a part of a porous substrate in a solution comprising at least one reactant under conditions suitable for the formation of a hydrogel material within pores of the porous substrate.

25. (Original) The process of claim 24 wherein the at least one reactant is a prepolymer formed by reacting a polyol and a diisocyanate.

26. (Original) The process of claim 25 wherein the at least one reactant further comprises at least one of a catalyst and a chain extender.

Claim 27. (Canceled).

28. (Original) A process for making a self-sealing material which comprises coating fibers of a support material with a hydrogel and assembling the coated fibers in such a way as to form a porous substrate.

Claims 29-42 (Canceled).